

5    **CLAIMS:**

1. A system to reduce radiation exposure to a user of a transmission device, the system comprising:

(a) the transmission device;

(b) at least one conversion device connectable to the transmission device, wherein each of said at least one conversion device is capable of converting a signal of a first type to a signal of a second type, said at least one conversion device being further connectable to at least one item selected from the group consisting of an electrical microphone, an electrical earphone, an acoustical microphone and an acoustical earphone; and

(c) an electrical coupler attachable to the transmission device, said electrical coupler being electrically coupled to at least one item selected from the group consisting of said conversion device and said electrical microphone.

2. The system of claim 1, said system comprising:

(i) A first conversion device being electrically coupled to said electrical wire, said electrical wire being electrically coupled to said electrical coupler, said electrical coupler being electrically coupled to said transmission device.

(ii) A second conversion device being electrically coupled to said electrical wire, said electrical wire being electrically coupled to said electrical microphone.

(iii) A third conversion device being electrically coupled to said electrical wire, said electrical wire being electrically coupled to said electrical earphone.

3. The system of claim 2, wherein said first conversion device is attached to or integrally formed with the transmission device.

4. The system of claim 1, wherein said signal of a first type and said signal of a second type are each independently selected from the group consisting of an electric signal, an acoustical signal and an electromagnetic signal.

5. The system of claim 1, wherein at least one item selected from the group consisting of said electrical coupler and said at least one conversion device are attached to or integrally formed with the transmission device.

10 6. The system of claim 4, wherein said acoustical signal is conveyed by at least one acoustical tube.

15 7. The system of claim 6, wherein said acoustical signal travels in a first direction via a first acoustical tube, and travels in a second direction via a second acoustical tube.

18 8. The system of claim 7, wherein said first and second acoustical tubes are assembled in any way selected from the group consisting of:

(i) connecting said tubes to one another; and

20 (ii) making said tubes concentric.

23 9. A conversion device for converting signals, the conversion device comprising a transducer.

25 10. The conversion device of claim 9, wherein said signal of a first type and said signal of a second type are each independently selected from the group consisting of an electric signal, an acoustical signal and an electromagnetic signal.

30 11. The conversion device of claim 9, further comprising at least one additional components selected from the group consisting of an encryption device, a decoder, an amplifier circuit, a filter circuit, an internal power supply, a micro controller, a wireless transceiver, a device for sending a signal to any entrance or any exit of the conversion device, a device for changing a signal to any entrance or any exit of the conversion device and a device that can control transmission of any signal to

5 any entrance and any exit of the conversion device.

12. A method for reducing radiation exposure to a user of a transmission device, the method comprising the steps of:

10 (a) providing at least one conversion device connectable to the transmission device and capable of converting a signal of a first type to a signal of a second type;

(b) connecting said at least one conversion device to the transmission device;

15 (c) further connecting said at least one conversion device to at least one item selected from the group consisting of an electrical microphone, an electrical earphone, an acoustical microphone and an acoustical earphone; and

(d) further connecting an electrical coupler to the transmission device, wherein said electrical coupler is electrically coupled to at least one item selected from the group consisting of said conversion device and an electrical microphone.

20 13. The method of claim 12, wherein said signal of a first type and said signal of a second type are each independently selected from the group consisting of an electric signal, an acoustical signal and an electromagnetic signal.

25 14. The method of claim 12, comprising the additional step of attaching to or integrally forming with the transmission device at least one item selected from the group consisting of said electrical coupler and said at least one conversion device.

15. The method of claim 13, comprising the additional step of conveying said acoustical signal by an acoustical tube.

30 16. The method of claim 15, wherein conveying of said acoustical signal in a first direction occurs in a first acoustical tube, and conveying of said acoustical signal in a second direction occurs in a second acoustical tube.

- 5 17. The method of claim 16, comprising the additional step of connecting said tubes in a way such that they will be in a configuration selected from the group consisting of:
- (i) tubes that are connected to one another; and
  - (ii) concentric tubes.

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